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## VERSATILE SYSTEM FOR PROCESSING DIGITAL AUDIO SIGNALS

### ABSTRACT

The present invention provides a system for processing digital audio signals according to modifications selected by an equipment end-user. A signal acquisition function (200) acquires a digital input signal (202). A user interface function (214) is operatively associated with a user interface (216), and is designed to receive the digital input digital signal and to generate a user-selected fundamental frequency. A comparator function (206) receives the digital input digital audio signal, and the user-selected fundamental frequency. The comparator function outputs a portion of the digital input signal, at the user-selected fundamental frequency, to a harmonics generation function (218). The harmonics generation function receives the portion of the digital input signal at the user-selected fundamental frequency and generates a number of signal harmonics for that portion of the digital input signal based on a defined harmonics profile. A summing function (210) adds the signal harmonics to the digital input signals, and outputs a user-modified signal (220).

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